

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/470,982	SHIM, DAE-HYUK	
	<b>Examiner</b>	<b>Art Unit</b>	
	Phuongchau Ba Nguyen	2665	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7-29-04 RCE.
2. ☒ The allowed claim(s) is/are 1, 3-10, 32-24, 13-14, 21, 15-20, 22-31, 35; Renumbered as 1-32 respectively.
3. ☒ The drawings filed on 23 December 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                  |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>11-10-04</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment  |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance                         |
|   | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with David Oren on 11-10-04.

3. The application has been amended as follows:

**-Claim 1, line 7:**

---- , wherein the fast circuit includes:

an input selecting circuit that shifts the input data, maps respective bits of the shifted input data, and selects a plurality of checking patterns on a bit by bit basis according to the shifted input data;

a frame start point detecting circuit that receives the checking patterns outputted from the input selecting circuit, and that detects the frame start point which designates the start location of the frame alignment signal as the frame start point detecting value;

an initial value setting circuit that sets an initial value for counting improper input data based on the frame start point detecting value, and that generates a control signal; and

a counter that counts a number of input data bits having improper data, as count results, from the frame start point, according to the control signal and the initial value----- had been inserted after the word "input data".

**-Claim 2 had been canceled.**

**-Claim 3, line 1; Claim 5, line 1; Claim 7, line 1; Claim 9, line 1:**

"2" had been changed to --- 1 ---

**-Claim 30, line 8:**

-----, wherein the first circuit comprises:

an initial value setting circuit that sets an initial value for counting improper input data based on the frame start point detecting value, and that generates a control signal; and

a counter that counts a number of input data bits having improper data, as count results, from the frame start point, according to the control signal and the initial value----- had been inserted after the word "format".

**-Claim 36 had been canceled.**

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4. The following is an examiner's statement of reasons for allowance:

Regarding claims 1, 3-10, 32-24, 13-14, 21, 15-20, 22-31, 35, the prior art fails to teach or suggest a reframer, an apparatus for checking a lost of frame, an integrated circuit for a digital communication comprising a reframer, or an integrated circuit for digital communication, comprising a plurality of reframers on a signal chip, wherein each reframer comprises "the first circuit comprising: an initial value setting circuit that sets an initial value for counting improper input data based on the frame start point detecting value, and that generates a control signal; and a counter that counts a number of input data bits having improper data, as count results, from the frame start point, according to the control signal and the initial value"(claims 1, 30), "the second circuit including a release circuit that, according to the releasing enable signal, counts the number of the first constant bits as the frame count result of a release state, and outputs a releasing signal when the first constant bits of the reframed data are the same as the first constant bits of the frame alignment signal, and are continuously inputted over the predetermined number of frames"(claim 13), "wherein the second circuit includes a declaration circuit that, according to the declaring enable signal, counts a number of the first constant bits as a frame count result of a declaring state, and outputs a declaring signal when the first constant bits of the reframed data are different than the first constant bits of the frame alignment signal and are continuously inputted over a predetermined number of frames"(claim 15), "a loss of frame checking apparatus coupled to the reframer, wherein the loss of frame checking apparatus includes a third circuit that detects the frame alignment signal in the reframed data, and a fourth circuit

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that checks whether the reframed data has a normal frame format, and provides a releasing state according to the checking result”(claim 22), in combination with other limitations, as specified in the independent claims 1, 13, 15, 22, 30.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is 571-272-3148. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 2:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/470,982

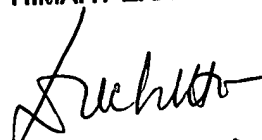
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Phuongchau Ba Nguyen  
Examiner  
Art Unit 2665

**DUCHO**  
**PRIMARY EXAMINER**

  
11-12-04